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January 22, 1999

Ms. Magalie Roman Salas Secretary - Federal Communications Commission The Portals, 445 Twelfth St., SW Washington, D.C., 20554

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PROFINAL COMMUNICATIONS COMMISSION

OFFICE OF THE SECRETARY

CC Docket Nos. 96-45 and 97-160 RE:

FCC CCB Cost Model Input Workshops—Plant Specific Expense Inputs

Dear Ms. Salas,

The attached information is being provided to the Common Carrier Bureau staff in response to the Bureau's December 10 workshop related to plant specific expense inputs for use in the universal service cost proxy model.

I request that this information be made a part of the record in the above referenced dockets. The original and three copies of this notice are being submitted to the Secretary of the FCC in accordance with Section 1.1206(a)(1) for this purpose. If there are any questions, please call.

Sincerely,

Et. C. Syned.

Attachments

CC:

C. Brown

K. King

S. Burnett

P. Cech

B. Loube

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Current to Book Ratio

PROBRAL COMMUNICATIONS COMMISSION OFFICE OF THE SECRETARY

It has been suggested that the investment base upon which to calculate maintenance ratios should have all prior years additions brought forward to a current year level by the application of a telephone plant inflation index. Such an approach effectively equates to a first year maintenance cost versus a level representative of maintenance over the life of an asset. Sprint believes this approach understates supported maintenance expenses over the lives of assets. Consequently, Sprint believes that a Current to Book Ratio should not be used in calculating maintenance expenses.

Sprint believes that the most accurate method of calculating plant specific expense ratios is simply to divide the current year's actual expense for each account by the <u>average</u> plant balance that gave rise to the expense. Forward looking expense reductions then flow into studies in two ways. First, the investment base to which maintenance rates are applied is lower due to assumed economies of scale in reconstructing the forward looking network all at one time. Second, greater use of fiber in the forward looking network leads to reduced maintenance cost because less maintenance is required of fiber than of the copper in the embedded network. We have included a schedule, Attachment A, which summarizes forward looking maintenance reductions versus embedded maintenance costs in two recent Sprint cost filings. The schedule supports our belief that significant maintenance reductions result from the assumption of a forward looking network. The schedule shows that in two of Sprint's largest properties, Florida and Nevada, forward looking plant specific maintenance costs fell by 28% and 30% respectively.

In practice, a telephone company's plant is made up of an accumulation of many years additions; in most cases, at succeedingly higher cost throughout the years. Due to increases in labor and material cost, maintenance will also increase each year. This has the effect of producing an average maintenance rate that is higher than the rate in an asset's first year. We have constructed an example, Attachment B, to illustrate this point. In the example:

- The asset class has a ten year life
- The company begins business in year-1 and completes a cycle of plant in year-11, when the year-1 asset is retired and the year-11 asset is added
- Assets are added and retired at mid-year
- The beginning maintenance rate is 10%
- Costs increase annually at a rate of 3% for both additions and maintenance expenses

It is realistic to assume rising costs over the life of an asset because in today's telecommunications environment, competitive wages and annual salary increases must be offered in order for an employer to attract and keep good employees.

The average maintenance rate is shown on the bottom line of Attachment B. As the example shows, the average maintenance rate:

- Is 10% in the first year
- Climbs in years two through eleven due to increases in maintenance cost while embedded investment remains constant
- Remains constant at 11.55% from the eleventh year, when a full ten years of plant is reflected in average TPIS

The eleventh through the twentieth year of Attachment B is most indicative of real world operations, since that time frame best illustrates the impact of rising costs of maintaining long term assets after a complete cycle of additions and retirements. Of course, in contrast to the reality demonstrated in the example, indexing of plant would cause the maintenance rate for all years to revert to the first-year rate of 10%. In the case of

Attachment B, the first year rate of 10% versus the run rate of 11.55% represents a 13% understatement of the maintenance rate.

Perhaps a simpler way of demonstrating the same point is to show the impact of rising maintenance costs throughout the life of just one year's addition of plant. We have constructed an example, Attachment C, which shows this impact. The assumptions for Attachment C are the same as those for Attachment B, except only one year's addition is studied. The example results in an average maintenance rate of 11.64%. Again, the point is made that using the first year's maintenance rate of 10% would substantially understate maintenance costs.

The concept of recovering average maintenance over the life of an asset is similar to the concept of calculating return on investment on a net asset balance over the life of the asset. The application of an equated cost of money to an investment to calculate the total of all year's returns on an investment recognizes that an average return over the life of the asset is theoretically correct. In the case of return on investment, if the first year return was incorrectly projected over the whole life of the investment, return would be significantly overstated. Conversely, in the case of indexing of investment for calculating maintenance rates, maintenance would be significantly understated if the first year rate was applied over the life of the investment.

Maintenance rates should be representative of the costs to operate over the life of the asset. Otherwise, in years after the first year, USF cost recovery will not reflect the reality of operating conditions and supported expenses will be understated. To this extent, implicit subsidies remain implicit. The rate should allow for the recovery of average maintenance expenses over the life of the asset and not assume a constant first-year rate.

Sprint's proposal to use the current year's actual expense for each account divided by the current year's average plant balance theoretically mirrors the results of Attachments B and C, and would produce maintenance rates that would recover average maintenance expenses over the lives of assets.

Level of Aggregation

Sprint believes that study area plant specific expense inputs are most appropriate. Only if study area inputs are used will cost results accurately reflect the specific characteristics of high-cost areas. Sprint maintains investment and expense data by study area.

Separation of Copper and Fiber Cable Accounts

Due to the significant difference in maintenance requirements of copper versus fiber plant, Sprint believes that copper and fiber plant should be segregated in forward looking USF studies. If a clear segregation is not made, the integrity of forward looking cable maintenance costs would not be reliable. Sprint maintains separate accounts for copper and fiber cable.

Exclusion of Non-Supported and Non-Forward Looking Costs

Non-Recurring Impact Of Mergers, Acquisitions, Process Re-Engineering

Sprint believes that such one-time costs should be identified by all companies making USF cost filings. The treatment of those costs should be disclosed. To the extent that such costs can be shown to contribute to the long run efficiency of the company, an amortization of those costs should be included in supported expenses.

Non-Recurring Expenses Recovered Through Non-Recurring Charges

Sprint believes costs which are recovered in non-recurring charges should be excluded from supported expenses. In lieu of identifying specific costs to be excluded, LEC's should be allowed to offset applicable non-recurring charge revenues against expenses. Of course, if applicable non-recurring charge revenues are included in a revenue benchmark, then no expense offset is necessary.

Other Costs and Operational Support Systems

Again, Sprint believes that such costs should be excluded from supported expenses to the extent that the costs are being recovered either in non-recurring or recurring revenues. Also, if the applicable revenues are included in a revenue benchmark, then no expense offset is necessary.

Productivity Offset

Sprint does not believe that a productivity offset should be used in the calculation of plant specific maintenance expenses. As stated previously in these comments, a forward looking network is a lower cost network because of construction efficiencies. Maintenance rates applied to a lower cost network obviously yield lower maintenance costs. Also, greater use of fiber in a forward looking network results in lower maintenance versus embedded simply because maintenance rates are lower on fiber plant.

In effect, the use of a forward looking network in USF studies inherently incorporates a productivity offset.

Preliminary Results

In addition to Sprint's disagreement with the overall approach of indexing plant, we would like to comment specifically on four of the preliminary input values presented at the December 10, 1998 workshop.

General Support Expense

Sprint believes that the general support expense input should be on the basis of a fixed amount per line and not on an E/I ratio basis. The reason is that Sprint's general support expense includes large amounts of dollars which are not for the maintenance of general support assets. Specifically, all general support accounts include significant amounts of building and equipment rental. Also, for account 6124, General Purpose Computers, each of Sprint's operating companies includes significant expenses for use of the corporate regional data processing centers. Again, these dollars do not relate to the maintenance of General Purpose Computer assets. Sprint's general support expense as a percent of average investment for 1997 is 29% as opposed to the FCC preliminary input value range of 6.2% to 8.7%. Sprint believes significant portions of general support expenses do not relate to maintenance of equipment, and therefore, expenses should not be expressed as an E/I ratio. But, if an E/I ratio is used, the input range should be broadened to include the types of rental and computer service expenses discussed above.

Aerial Cable Metallic, Underground Cable Metallic, and Buried Cable Metallic Expense

In all of these categories of expense, Sprint's inputs are significantly higher than the FCC preliminary input values presented at the December 10, 1998 workshop. These differences are summarized below.

	Sprint	FCC Low	FCC High			
	Input	Range	Range			
Aerial Cable Metallic	8.71%	2.88%	6.19%			
Underground Cable Metallic	3.82%	1.31%	1.96%			
Buried Cable Metallic	6.18%	2.07%	4.82%			

Sprint's inputs are based on total Local Telephone Division regulated results for 1997. In recent years, Sprint has refined its processes and trimmed its workforce to be more efficient. These expenses are representative of Sprint's ongoing levels of expense required to maintain these categories of plant; and, Sprint believes that we are a least cost provider for our service territories.

Sprint's expenses for these categories represent salaries, benefits, materials and other expenses incurred in the performance of ordinary repair, work order rearrange & change, and service order rearrange & change maintenance functions. All of these expenses will be necessary in the future operations of these categories of plant.

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Forward Looking Maintenance Reductions - Attachment A Comments On Preliminary USF Input Values - Plant Specific Expenses

Plant Specific Expense Amounts Are The Total Of Switching, Transmission & Cable & Wire Facilities Expense Accounts

	ARMIS 1997 <u>Expenses</u>	Forward Looking <u>Expenses</u>	% Change from <u>Embedded</u>
Florida	138,863	100,181	-28%
Nevada	43,032	30,124	-30%

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Maintenance Example - Attachment B
Comments On Preliminary USF Input Values - Plant Specific Expenses

Ye 1		Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Year 8	Year 9	Year 10	Year 11	Year 12	Year 13	Year 14	Year 15	Year 16	Year 17	Year 18	Year 19	Year 20
Additions Year 1 \$ - Year 2 Year 3 Year 4 Year 5 Year 6 Year 7 Year 8 Year 9	1,000 \$	1,030 \$	1,061	1,093	1,126 \$	1,159 \$	1,19 4 \$	1,230	1,267	4.005										
Year 10 Year 11 Year 12 Year 13 Year 14 Year 15 Year 16 Year 17 Year 18 Year 19 Year 20 Retirements Year 1 Addns	0 0 0	Example A Company Additions Year-1 Ad Beginning Inflation R Maintenance	Asset With Begins Doi & Retireme dition is Re Maintenan ate For Bot ce is 3%	10-Year Ling Busines onts Occur a dired in Yea ce Rate 10 th Additions	ife ss in Year-1 at Mid-Year ar-11 0% s and	-			•	1,305	1,344 \$	1,384	1,426 \$	1,489	1,513 \$	1,558 \$	1,605	; 1,653 \$	1,702	1,754
Year 2 Addns Year 3 Addns Year 4 Addns Year 5 Addns Year 6 Addns Year 6 Addns Year 7 Addns Year 8 Addns Year 8 Addns Year 9 Addns Year 9 Addns	bearman of										(1,000)									(1,305)
Telephone Plant In Service \$ Average TPIS \$	1,000 \$ 500 \$	2,030 \$	3,091 \$ 2,560 \$	4,184 \$ 3,637 \$	5,309 \$ 4,746 \$	6,468 \$ 5,889 \$	7,662 \$ 7.065 \$	8,892 \$	10,159 \$ 9,526 \$	·	11,808 \$							14,522 \$ 14,311 \$	14,958 \$	
Maintenance Year 1 Addns Year 2 Addns Year 3 Addns Year 4 Addns Year 5 Addns Year 6 Addns Year 7 Addns Year 8 Addns Year 9 Addns Year 10 Addns Year 11 Addns Year 12 Addns Year 13 Addns Year 13 Addns Year 14 Addns Year 15 Addns Year 16 Addns Year 16 Addns Year 17 Addns Year 18 Addns Year 18 Addns Year 19 Addns Year 20 Addns	50.00 \$.	103.00 \$ 51.50 \$	106.09 \$ 106.09 \$ 53.05 \$	109.27 \$ 109.27 \$ 109.27 \$ 54.64 \$	112.55 \$ 112.55 \$ 112.55 \$ 112.55 \$ 112.55 \$	115.93 \$ 115.93 \$ 115.93 \$ 115.93 \$ 115.93 \$ 57.96 \$	119.41 \$ 119.41 \$ 119.41 \$ 119.41 \$ 119.41 \$ 119.41 \$ 59.70 \$	122.99 \$ 122.99 \$ 122.99 \$ 122.99 \$ 122.99 \$ 122.99 \$ 122.99 \$ 122.99 \$	126.68 \$ 126	130.48 \$ 130.48 \$ 130.48 \$ 130.48 \$ 130.48 \$ 130.48 \$ 130.48 \$ 130.48 \$ 130.48 \$ 5.24 \$ \$	67.20 134.39 134.39 134.39 134.39 134.39 134.39 134.39 67.20 5	69.21 138.42 138.42 138.42 138.42 138.42 138.42 138.42 138.42 138.42 138.42 138.42 138.42 138.42 138.42	 71.29 142.58 \$ 142.58 \$ 142.58 \$ 142.58 \$ 142.58 \$ 142.58 \$ 142.58 \$ 142.58 \$ 142.58 \$ 	73.43 146.85 146.85 146.85 146.85 146.85 146.85 146.85 146.85 146.85 73.43 	75.63 \$151.26	77.90 155.80 155.80 155.80 155.80 155.80 155.80 155.80 155.80 155.80 155.80 155.80 155.80		82.64 5 165.28 5 165.	85.12 170.24	
Total Maintenance \$ 9	50.00 \$	154.50 \$	265.23 \$	382.45 \$	506.48 \$	637.60 \$	776.13 \$	922.41 \$	1,076.75 \$	1,239.53 \$	1,343.92 \$	1,384.23 \$	1,425.76 \$	1,468.53 \$	1,512.59 \$	1,557.97 \$	1,604.71	1,652.85	1,702.43 \$	1,753.51
Average Maintenance Rate 16	0.00%	10.20%	10.36%	10.51%	10.67%	10.83%	10.98%	11.14%	11.30%	11.46%	11.55%	11.55%	11.55%	11.55%	11.55%	11.55%	11.55%	11.55%	11.55% .	11.55%

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Maintenance Example - Attachment C

Comments On Preliminary USF Input Values - Plant Specific Expenses

A 1 150		•	4 000 00	Annual & Average Maintenance Rate
Addition		\$	1,000.00	
Maintenance	Year 1		50.00	10.00%
	Year 2		103.00	10.30%
	Year 3		106.09	10.61%
	Year 4		109.27	10.93%
	Year 5		112.55	11.26%
	Year 6		115.93	11.59%
	Year 7		119.41	11.94%
	Year 8		122.99	12.30%
	Year 9		126.68	12.67%
	Year 10		130.48	13.05%
	Year 11		67.20	13.44%
Total Maintena	nce & Average Rate	\$	1,163.58	11.64%

- o Example Asset With 10-Year Life
- o Addition Occurs at Mid-Year
- o Beginning Maintenance Rate 10%
- o Inflation Rate For Maintenance is 3%